

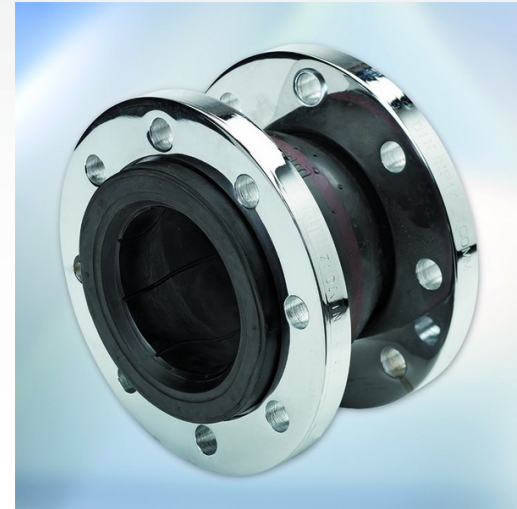
## D Type expansion joints

### Features

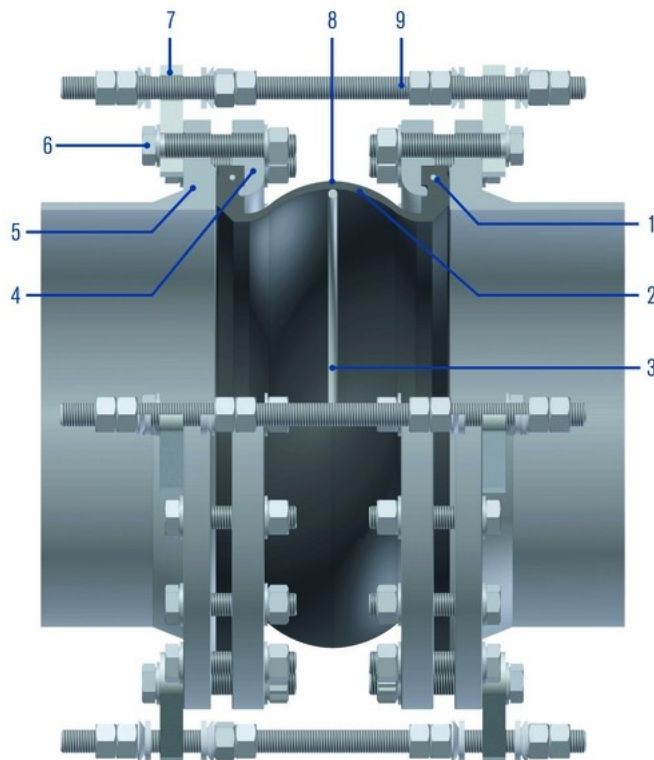
- Single sphere molded design
- Wide range of materials available
- No gaskets or packings needed
- Reinforcement rings

### Advantages

- Reduction/isolation of vibrations
- Noise reduction
- Compensate for misalignments and settings
- Compensate for axial, lateral and angular movements
- Available from stock
- Extend lifetime of equipment
- Easy to install
- Reliable operation



Type with tie rods and floating flanges



### Item Description

- |   |                 |
|---|-----------------|
| 1 | Metallic ring   |
| 2 | Internal lining |
| 3 | Vacuum ring     |
| 4 | Backing flange  |
| 5 | Pipe flange     |
| 6 | Bolt            |
| 7 | Loose bracket   |
| 8 | External lining |
| 9 | Tie rod         |

D Type expansion joints (1)  
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## Operating range

Diameter: DN 20 ... DN 750 (3/4" ... 30"),  
Pressure: Vacuum ... 16 barg (225 PSIG)  
Temperature: ... 160 °C (320 °F)  
Maximal movements:  
Axial: -40 mm (1") / +20 mm (0.79"),  
Lateral: ±25 mm (0.98"),  
Angular: ±25 °

## Functional description

Type D is a molded standard rubber expansion joint for standard applications, which is installed in duct or pipe systems for transportation of liquids and gases. It takes up movements in all directions, neutralizes stress from the installation, absorb vibrations and reduce noise and oscillations.

## Materials

Bellows: According to media and application, see table.

## Recommended applications

- Process industry
- Oil and gas industry
- Refining technology
- Petrochemical industry
- Chemical industry
- Power plant technology
- Pulp and paper industry
- Food and beverage industry
- Building services industry
- Shipbuilding
- Water and waste water technology
- Pump lines
- Pipe systems in industrial plants
- Heating and cooling systems in industrial buildings
- Cooling water systems
- Potable water systems

## Standards and approvals

- BV type approval
- PED 97/23/EC
- Drinking water WRAS

## Installation, Details, Options

### Flanges

Flanges can be supplied according to ANSI/AWWA and PN10/16 standards, electro or hot dip galvanized.

### Tie rods

At high pressure thrust, it is recommended that tie rods are used.

## Bellows materials

Color dots	Material	Main application	Max temp. *
Grey	Neoprene	Sea water, water cooling systems	107 °C (225 °F)
Red	EPDM	Hot water, heating and cooling systems	121 °C (250 °F)
White/Red	EPDM WRAS 60	Potable water, drinking water	60 °C (140 °F)
Yellow	Nitrile	Resistant to oil and gas	99 °C (210 °F)
Green	CSM	Strong acids, except nitric acid or sulphuric acid	121 °C (250 °F)
Red/Red	FKM	High temperatures, products derived from petroleum	160 °C (320 °F)
Blue	Butyl	Suitable for alkaline waste, compressed air (oil free) and chemicals, weather resistant	121 °C (250 °F)

\* Temperature resistance is dependent on system pressure.

Chemical resistance guide for elastomers is available on request.

Other rubber types such as natural rubber etc. can be supplied on request.

## D Type expansion joints (2)

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## Dimensions

DN mm	DN inch	Short length mm	Short length inch	Long length mm	Long length inch	Working pressure kPag	Short axial compression	Long axial compression	Short axial elongation	Long axial elongation	Lateral	Angular °
20	3/4	130	5	150	6	1600	30	35	15	20	20	25
25	1	130	5	150	6	1600	30	35	15	20	20	25
32	1 1/4	130	5	150	6	1600	30	35	15	20	20	25
40	1 1/2	130	5	150	6	1600	30	35	15	20	20	25
50	2	130	5	150	6	1600	30	35	15	20	20	20
65	2,5	130	5	150	6	1600	30	35	15	20	20	20
80	3	130	5	150	6	1600	30	35	15	20	20	20
100	4	130	5	150	6	1600	30	35	15	20	20	15
125	5	130	5	150	6	1600	30	35	15	20	20	10
150	6	130	5	150	6	1600	30	35	15	20	20	10
200	8	130	5	150	6	1600	30	40	15	20	20	8
200	8	-	-	200	8	1600	-	40	-	20	20	8
250	10	130	5	200	8	1600	30	40	15	20	20	6
300	12	130	5	200	8	1600	30	40	15	20	20	6
350	14	-	-	200	8	1000	30	40	15	20	20	6
400	16	-	-	200	8	1000	-	40	-	20	20	5
450	18	-	-	200	8	1000	-	40	-	20	20	5
500	20	-	-	250	10	1000	-	40	-	20	20	5
600	24	-	-	250	10	800	-	40	-	20	20	4
650	26	-	-	250	10	800	-	40	-	20	20	3
700	28	-	-	250	10	800	-	40	-	20	20	3
750	30	-	-	250	10	800	-	40	-	20	20	3

### D Type expansion joints (3)

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